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World Shortage of Calves and Feeder Cattle

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This week's cover:

Technicians check calf weights at a testing station in Egtved, Denmark. Increased demand for veal and beef has caused a worldwide shortage of calves. For an assessment of this problem, see the story beginning on this page.

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World's Farmers Compete for Calves

Part I. Europe

By LARRY E. STENSWICK
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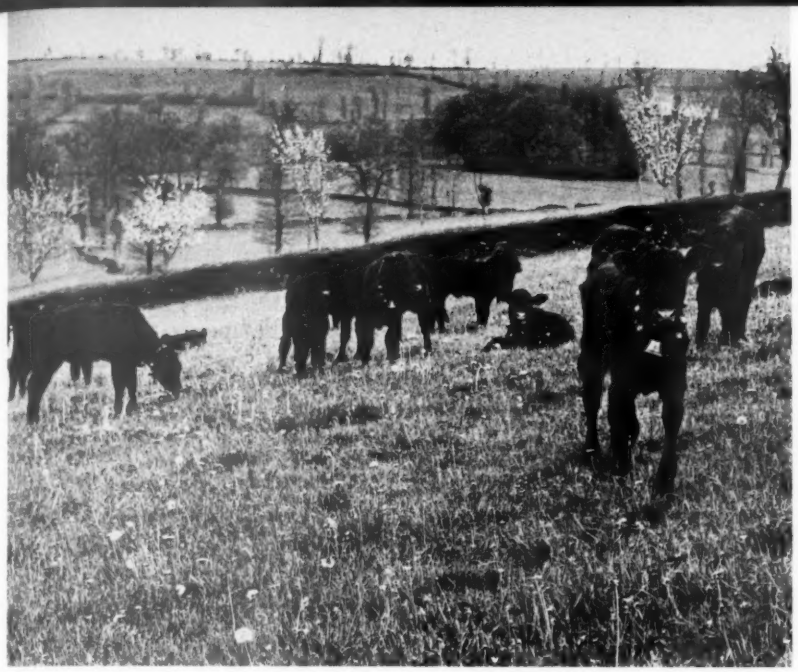
The well-documented and growing world deficit in beef production is reflected in a parallel and also growing world shortage of calves and feeder cattle. This shortage has made itself felt in importing and exporting countries alike; and the situation in the United States, which is both, affects and is affected by the situation elsewhere.

Nowhere is the world calf shortage making more impact than in the European Community (EC)—especially in Italy, where imports of calves and feeder cattle have become an indispensable input into the domestic livestock sector. Italian imports, estimated at 1.2 million calves last year, are up considerably from the 300,000 annual rate that prevailed as recently as 1966.

Most of these imports have come from Italy's EC partners through the harmonization of the European beef and veal market under the Common Agricultural Policy (CAP). This has integrated the traditionally lower cost surplus calf areas in Germany and France with the higher cost deficit areas in Italy. Italy's imports from Eastern Europe also have grown, from about 83,000 head of calves in 1966 to an estimated 225,000 last year. But the rapid expansion of calf imports into Italy is now slowing as farmers in both the EC and Eastern Europe compete more vigorously for the available supply.

Several factors appear to rule out an expansion of the EC calf supply.

First, there are virtually no spe-



A herd of French calves at pasture on a spring hillside. (Photo: French Ministry of Agriculture.)

cialized beef breeds in Europe. Most beef and veal is produced from cows culled from dairy herds and calves not required as herd replacements. An expansion of cow numbers would result in increased milk production, an upset in balance between supply and demand for dairy products, and the eventual rebuilding of a mountain of surplus butter. Calf imports are a convenient shortcut to increased beef and veal production with an unchanged cow population.

Second, dairy cow numbers in the EC are actually trending downward, under the influence of attractive meat prices, financial incentives to restructure away from milk production, and sharply narrowed profit margins for dairy farmers. Since 1969 the EC cow population has declined by about 6 percent, or over 1.4 million head.

A principal hindrance to the expansion of beef production in Europe is the traditional demand for veal, which draws heavily on calf supplies. Europe has the potential for greatly increasing its beef output by fattening more calves up to slaughter weights of 1,000 to 1,200 pounds instead of slaughtering them for veal. In 1971, calf slaughter as a percentage of total slaughter was 36 percent in the EC, compared with 7 percent in the United Kingdom and 8 percent in the United States. Stated another way, if the percentage of calves now being slaughtered in the EC were lowered to the rate prevailing in the United States, beef production would jump by an estimated 2.32 billion pounds or about 24 percent of 1971 EC beef and veal production. However, such a decline in the EC calf slaughter rate is not expected.

Veal production in the EC has been growing marginally through heavier slaughter weights. In 1971, at 198 pounds, the EC average dressed weight of calves was up 31 pounds from that of 1966, although during the same period the number of calves slaughtered fell from 8.0 million to 7.3 million.

There are indications, however, of an approaching end to further increases in the production of Europe's preferred tender whitish veal through this route of heavier slaughter weights. This slowdown is due in part, perhaps, to the biological inability of young bulls to grow beyond a certain weight on a diet of milk replacer only. If Europe wishes to maintain veal production, then either increased calf slaughter or increased calf imports will be required. Thus, strong consumer demand for this type of meat is expected to keep the calf market buoyant.

Also working against increased beef production is the relative cost of feeds. Calves in the EC are fed a low-cost subsidized milk replacer, while cattle are fattened on high-cost feedgrains which are well protected behind a wall of tariffs and a system of variable levies.

Given the small-scale structure of much European farming, the EC farmer prefers to raise a calf which will provide a quick return and minimize his risk of adverse price movements and death losses. Calves also require less labor and housing than cattle, and their feeding is not tied to the production of roughages and feedgrains.

The EC Commission has recognized some of these factors in its recent proposal to increase beef production. It recommended a system of premiums to those farmers owning at least 30 head of cattle (20 of which are cows) who undertake to increase their herds by 30 percent in 3 years. The proposed income-maintaining subsidy of $60 for each head held at the beginning of the campaign is expected to expand beef production by 75,000 tons per year starting in the second year of implementation.

This scheme is an indication that the 9-percent increase originally proposed in the orientation price of mature cattle for the year beginning April 1, 1972 —even following the 6-percent increase of last year—was insufficient to stimulate beef production. A two-stage increase—4 percent effective April 1, with the balance expected in September —was recently accepted by the EC Council of Ministers. A higher price was apparently ruled out because seasonal market intervention would be burdensome and consumption could be cut by buyer resistance to higher prices at retail.

A second proposal to increase production is aimed at encouraging the import of cattle and calves for fattening.

Under existing EC regulations, young bulls weighing between 220 and 300

kilograms (485-661 lb.) can be imported levy free but subject to the full customs duty of 16 percent; calves weighing less than 80 kilograms (about 175 lb.) can be imported levy free and with a reduced tariff of 8 percent. However, these concessions apply only if the animals are intended for fattening and if the market price exceeds the orientation price.

Under the new proposal, these animals would be levy free at all times, and tariffs would be reduced to 8 percent for young bulls and 4 percent for calves. However, supplying countries must guarantee that exports to the EC will occur in an orderly manner, that strict administrative cooperation will be established, and that all trade diversions will be avoided.

If accepted by the EC Ministers, the herd expansion scheme may result in a higher retention of calves. The calf import proposal, however, may not have the expected impact, because of the growing tendency of East European calf suppliers to fatten calves in their own countries and to sell the higher profit products—beef and slaughter cattle—on the EC market where high beef prices prevail. With most of the East European 5-year plans stressing livestock production and increased domestic consumption of livestock products, it seems unlikely that EC calf imports from this source will advance significantly.

The European calf shortage has revived interest in obtaining calves from more distant sources such as the United States, which did export over 9,000 dairy calves to Italy in the mid-1960s. This occurred after the Italian Government initiated subsidy payments of nearly $20 per head and suspended tariffs on calf imports in an attempt to overcome sharply rising prices—the result of reduced European calf crops. Baby bull calves, primarily Holstein, were shipped by regularly scheduled air cargo flights in wirebound crates 3 by 3 by 4 feet. High mortality and expensive air freight rates limited the success of the trade, and the recovery of U.S. prices brought the shipments to an end in early 1966.

Some have proposed that calf exports to Italy could be resumed, given the advances since made in air cargo technology and the subsequent lower transport costs. Jet charters that utilize the full floor space by laying down a plastic liner and bedding and then loading the animals up a ramp have replaced the cumbersome crates on pallets, with the result that air freight rates have dropped markedly.

There are, however, obstacles to this trade. While the EC's variable levy system on calves is one of these obstacles, the major one is that while European calves are still considerably more expensive than U.S. calves, the price margin has narrowed. Dairy calves in the United States that were being sold f.o.b. for $19 to $22 in 1965 are now selling in the $55-$65 range, while calf price advances in Europe have been dampened by increased integration of the EC calf market and by the rapid increase in imports from Eastern Europe. If calf imports into the EC taper off as expected, European calf prices can be expected to rise quickly, and the margin between U.S. and European calves may again make these shipments profitable.

The four countries expected to join the EC—Ireland, the United Kingdom, Denmark, and Norway—will add 22.1 million head of cattle to the EC's present 51.7 million head. However, larger calf crops will be linked primarily to increased cow numbers, and the present EC dilemma—in which attempts to enlarge calf supplies by increasing the number of cows would lead straight back to dairy surpluses—will be extended to the new entrants.

This expansion of the EC dairy-beef conflict will occur because Ireland, Norway, and Denmark have dual-purpose animals like those of the EC. In the United Kingdom, a shift toward this type of animal could well take place as the returns on milk production rise to EC levels.

Of the four entrants, Ireland and the United Kingdom are expected to have the greatest impact on the EC calf situation.

Ireland has traditionally supplied feeder (store) cattle to the United Kingdom, and until 1965 most of Ireland's exports were live animals. The Anglo-Irish Free Trade Area Agreement of that year assured equal access for Irish beef on the British market, although in return the Irish Government agreed that it would do its best to insure annual exports of at least 638,000 feeder cattle to the United Kingdom.

Equal access for Irish beef was achieved through a subsidy payment scheme. These payments were linked to the U.K. deficiency payments which protected British farmers from the competition of cheaper imported meat. Until early last year, Irish beef exports to the United Kingdom did advance; but the changeover to higher price EC conditions in the United Kingdom resulted in herd building, strengthened cattle prices, and elimination of the deficiency payments.

As a consequence, the Irish beef subsidy also was eliminated, and British farmers were in a position to bid the Irish store cattle away from Irish slaughterhouses. The old trade pattern had reemerged, with feeder shipments across the Irish Sea increasing 18 percent over 1970 to nearly 600,000 head in 1971.

The strength of the British market is also reflected in the competition for calves generally. At Sturminster Newton, Britain's largest calf market, prices hit a record of $69.63 per calf, with Herefords averaging $78.82—double the 1970 average.

The enlargement of the EC could result in some diversification of Irish feeder cattle away from the U.K. market toward other EC countries. Even with over 6 million head of cattle, a climate mild and free of extremes, and a relatively disease-free herd, Ireland is not likely to expand its calf production rapidly, given the limitations of its credit, marketing, and farm structure and the practice of using minimum maintenance rations during the winter.

The U.K. cattle population of 12.9 million head is expected to grow. But Britain, unlike its about-to-be partners in the EC, has a low calf slaughter rate, and veal production last year fell 16 percent to only 6,700 tons (compared with 928,000 tons for beef). Additional calf inputs into beef production must primarily depend, therefore, on expansion of cow numbers.

In Denmark, the steady downward trend of 2 to 3 percent per year in total cattle numbers experienced during the past 10 years may now have bottomed out at 2.7 million head, and EC enlargement may cause some expansion of the Danish cattle herd.

The overall result of EC expansion appears to be that farmers and consumers in 10 countries instead of six will all compete for calves—the production of which will continue to lag behind demand.

COFFEE RUST:
A Menace to Brazil's Chief Export

Part II. Will new cultural practices and resistant varieties help growers to control this major disease?

By J. PHILLIP ROURK
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About 2 years ago coffee rust, caused by the fungus *Hemileia vastatrix,* was found in the Brazilian State of Bahia. Despite efforts to eliminate the disease, it has been found in other coffee States, and is now so firmly entrenched that it will never be eliminated.

Some degree of control over the fungus can be achieved by spraying infested areas with copper-based fungicides. In order to maximize the efficiency of chemical disease control of coffee rust, it will be necessary to change traditional methods of cultivating coffee in Brazil.

Brazilian coffee farmers generally plant four trees, spaced about 1 foot apart, in a single hole (cova). The "tree" thus formed matures at a height of about 9-15 feet. The foliage is dense, and the lower branches form a skirt around the base of the tree, touching the ground. Such an arrangement provides a microclimate which is ideal for the propagation and spread of rust.

The IBC and other concerned State and Federal agencies now recommend that existing coffee farms invaded by rust take the following steps, in addition to initiating a spray program:

- Top the trees comprising a "cova" so that only a stump remains for each tree from which new growth will emerge, and eliminate two of the customary four trees.
- Prune to prevent development of the branchy lower skirt;
- Thin out the remaining branches to permit better spray coverage and to allow light to penetrate deeply into the leafy areas.
- Limit the height of the tree by pruning, or by selection of shorter varieties, to facilitate spraying.

Where new coffee farms are to be planted using presently available varieties susceptible to rust, the recommendations are to plant coffee trees on level land to permit use of motorized spray equipment, thereby reducing the cost of spraying; to grow no more than two trees per cova; and to concentrate growths in zones where the temperature/rainfall equation is less favorable to rust.

Adequate fertilization is also essential to promote vegetative growth and leaf replacement.

Role of resistant varieties. Although it may be possible to control coffee rust by chemical means in many areas, the ideal solution to the problem would be to develop cultivars of *coffea arabica*—the type of coffee grown in Brazil—which combine the characteristics of high yield, good quality, and disease resistance. Plant breeding, however, is a slow process for a tree crop.

Fortunately for Brazil, and coffee drinkers around the world, a great deal of research into this problem has been going on for a number of years.

One of the major centers for research is located at Oeiras, Portugal, where work on rust has been carried out since 1951. The importance of this research was underlined in 1955 when the Governments of the United States and Portugal signed an agreement providing for the foundation of the Coffee Rust Research Center at Oeiras.

Study of well over a thousand samples of rust, received from 35 areas of the world, has enabled scientists at the Center to distinguish 26 different races of *Hemileia vastatrix* on 21 different clones selected from amongst several coffee species.

The range of hosts for each of the rust races is variable. Race XVI, for example, was able to infect 14 of the 21 different clones studied, while Race XVII attacks only one. The most common and widely distributed rust race in the world is Race II, which is pathogenic only to four of the hosts studied. This is the race present in Brazil.

The Center has also tested tens of thousands of coffee seedlings from 37 different countries, with all the avail-

Many coffee farms, such as this smallholder plot, are on hillsides, making it difficult to control coffee rust by using tractor-drawn spray equipment.

The first article in this two-part series appeared in the May 15 issue of *Foreign Agriculture.* Single copies of the current issue and the previous one may be obtained for 20 cents from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

A worker harvests coffee beans on burlap to prevent contact with the ground.

able races of rust. This screening led to a classification of 21 natural groupings of coffee plants, classed according to the resistance each presents to the various races of rust. The behavior of these groups ranges from full resistance to all races of rust, to full susceptibility, with various intermediate groups.

Unfortunately for Western Hemisphere growers, the plantations of Central and South America grow coffee constituted almost exclusively from cultivars classified as Group E, which are susceptible to 17 of the 26 known races of *Hemileia vastatrix* including Race II.

In Brazil, research into various aspects of rust is being carried out at a number of different centers, including one at Caratinga, Minas Gerais, established specifically for this purpose. Much of the work of breeding coffee varieties with a resistance to rust, however, is centered in the Section on Genetics of the Agronomic Institute at Campinas, State of São Paulo.

Investigation into rust resistance at the Campinas station dates from 1953, and is based in part on resistant plant material transmitted from Portugal through the facilities of the U.S. Department of Agriculture. However, because Western Hemisphere coffee crops were not endangered by rust until 1970, work at South American research centers proceeded at a rather leisurely pace. Since the discovery of rust in Brazil 2 years ago, a sense of urgency has prevailed and the tempo of breeding programs was stepped up.

The search for resistant varieties is basically a work of hybridization. In the period 1955 to 1969, approximately 300 different hybrid combinations were developed and studied. For the most part these were crosses between resistant varieties and Brazilian cultivars such as *Mundo novo, Catuai,* and others. F^2 populations derived from a variety of crosses have been under observation in Campinas. Specimens of those which appeared most promising have been sent to the Rust Research Center in Portugal for further testing.

Although investigation into rust resistance continues, one strain, based on an interspecific hybrid of *Coffea arabica* and *Coffea canephora,* seems promising. Plants from this hybridization have been backcrossed four times to the high-yielding cultivar *Mundo novo.* The resulting progeny are resistant to most races of rust. Quality is presumably acceptable, but more testing must be done in this regard. Yields are good, although perhaps only 70 or 80 percent that of the pure *Mundo novo* or *Catuai.*

These trees are currently being field-tested at nearly 200 different places in various coffee-producing regions in Brazil to determine their behavior under various ecological conditions. Should these plants perform well in the field it is estimated that seed sufficient to plant 100 million trees could be made available to farmers in 1974.

The substitution of susceptible coffee varieties by resistant ones will be a lengthy process because at least 500 million, and possibly as many as 1,750 million, trees might be needed to replace those in areas where it appears that rust attacks will range from moderate to severe.

IBC's antirust education program. Fully aware of rust's potential for creating disaster, the IBC has launched a well-financed and well-organized campaign to teach Brazilian farmers how to identify and combat the disease. The program makes extensive use of colored posters and pamphlets depicting infected coffee tree leaves so that the farmer can learn to distinguish rust from other less serious leaf diseases.

In addition, numerous radio and TV programs provide information regarding control methods and seek to convince the farmer of the serious nature of the disease and the urgent need to initiate a program of spraying as soon as the disease appears. Mobile vans equipped with 16-mm. movie and slide projectors, tape recorders, and public address systems also tour rural areas in the coffee-producing States.

IBC also is providing an increasing amount of technical assistance to farmers through its regional offices. The IBC staff headquartered in Londrina, Paraná, for example, includes some 50 agronomists and 50 technicians, all of whom are involved in counseling coffee farmers regarding modern cultivation practices and the manner to combat rust if it strikes. According to IBC officials, farmers have generally responded well to these efforts, although there has been some understandable reluctance to "stump" old coffee trees, while other producers feel that a shortage of water on their farms will make it difficult to spray against rust.

Although clearly concerned about the rust problem, IBC officials express optimism regarding the future of coffee production in Brazil. They believe the country possesses the technological capability and resources necessary to prevent the disease from becoming a major threat to the coffee industry.

'Brazil should have a substantial amount of seed for rust-resistant varieties available by 1974. The IBC, however, has decided not to wait for these seed varieties to become available 2 years hence, but has initiated a program calling for the planting of several hundred million trees during the next 4 years.

Because these trees will be of varieties susceptible to the rust, it has been recommended that they be planted only in those zones where, by virtue of lower temperature and rainfall, rust can be expected to be less severe.

Planting in such areas does not mean the trees will not get rust, only that the disease can be expected to be less severe, thus making chemical control much easier.

The IBC's decision not to wait for rust-resistant coffee trees was partly based on the fact that Brazilian coffee production has been declining in recent years and new planting programs to reverse the trend and rejuvenate the coffee industry had been under consideration by the IBC and other organizations in Brazil, even before the discovery of rust in 1970.

Outlook. The question the world is asking is this: What effect will rust have on coffee production in Brazil in the years ahead? To reply, one would need answers to numerous other questions.

Is chemical rust control economically

(Continued on page 12)

The EC and the EFTA "Neutrals" —

Current Trade Talks Could Hurt U.S. Farm Exports

By JAMES LOPES and
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Foreign Demand and Competition Division, Economic Research Service

Harvester in Swedish grain field; grains are Sweden's top export to EC.

U.S. agricultural exports could be adversely affected by current negotiations between the European Community (EC) and Austria, Portugal, Switzerland, Sweden, and Finland, according to a recent report.[1] These five countries (along with Iceland) will remain in the European Free Trade Association (EFTA) on January 1, 1973, when the United Kingdom, Denmark, and Norway are expected to leave EFTA and become members of the EC.

The negotiations between the EC and the remaining countries of EFTA (often termed neutrals) are motivated by the desire to avoid a re-erection of tariff barriers between these countries and the three departing EFTA members. The major goal of the negotiations is to provide for the free movement of industrial goods between the EFTA neutrals and the enlarged EC. However, all parties have expressed interest in certain agricultural concessions.

In November 1971, the U.S. Government made a strong appeal to the EC expressing concern over the discriminatory aspects of the proposed trade arrangements between the EC and the EFTA neutrals. The United States reserved its rights under existing agreements, including the GATT, and emphasized its intention to defend U.S. trade interests vigorously.

Status of negotiations. Formal negotiations between the EC and the EFTA neutrals began in December 1971. The second round of negotiations was held in the last half of March 1972, while the third, and presumably final, round will begin near the end of May. Negotiations are expected to be completed in the first half of 1972 so that the agreements can go into effect on January 1, 1973, the same date as the accession treaties.

Agriculture has so far proved to be a major obstacle to agreement. The Community rejected from the outset a broad approach to negotiations in the agricultural sector, fearing that its sovereignty with regard to the development of its Common Agricultural Policy (CAP) would be compromised. The EC is, however, seeking trade concessions from the neutrals on certain agricultural products. Although their exact requests are not known, they reportedly expressed interest in grains, livestock and meat, dairy products, and certain fruit, vegetable, and horticultural products.

In the first round of negotiations, the EC took the position that it did not intend to reciprocate by granting agricultural concessions to the neutrals, except in the case of Portugal. Instead, the EC viewed these agricultural concessions as balancing the vast industrial benefits to be conferred on the neutrals by the agreements. All of the neutrals rejected this position, insisting on reciprocity as the basis for negotiation in the agricultural sector.

The Community revised its negotiating mandate somewhat for the second round, offering concessions on a limited number of processed agricultural products not listed in Annex II of the Treaty of Rome—in other words, not directly subject to the CAP.

Again, the exact EC offer is not known; however, among the products falling in this general group are chocolate products, certain cereal preparations (such as baby or dietetic foods and bakery products), certain alcoholic and nonalcoholic beverages (excluding wine), and various miscellaneous food products (such as yeast, soups, broths). The EC offer apparently varied by country and, in some cases, consisted only of an offer to remove the fixed duty while leaving intact the variable levy applying to the grain, sugar, or dairy content of the product.

This offer was also judged insufficient by the neutrals. The EC Council of Ministers further revised the negotiating mandate in their April 24-25 meeting. They decided to broaden the offer on processed agricultural products, primarily by eliminating variations by country. However, they were unable to agree on the other products in the agricultural sector.

The difficulties experienced in the early rounds of negotiations prompted the EC Commission to recommend the elimination of the agricultural section from the agreements with Austria, Finland, Sweden, and Switzerland. At the same time, the Commission urged tariff concessions on a number of Portuguese farm products, including processed tomatoes and wine. Portugal has already offered certain agricultural concessions to the EC.

The proposed deletion of agriculture from the negotiations was blocked in the Council, mainly through the opposition of Italy. Decision on the agricultural component of the offer to Portugal was also held up. These issues will

Harvesting grapes in Portugal; about a sixth of wine exports go to the EC.

[1] *The European Free Trade Association Without the United Kingdom, Denmark, and Norway: Implications for Agricultural Exports of the Remaining EFTA Countries and the United States,* ERS-Foreign 338, U.S. Department of Agriculture, April 1972.

Danish cheeses could have better markets after Denmark joins the EC.

probably not be resolved until the June 5-6 meeting of the Council.

EFTA trade with United States. The EFTA neutrals' agricultural imports from the United States averaged close to $200 million annually in the 3-year period 1968-70 (see accompanying table.) Much of this trade was in vegetable oilseeds and oilcakes, fats and oils, hides and skins, tobacco, and cotton—items unlikely to be included in the concessions granted to the EC.

The EC is a large net importer and relatively minor producer of oilseeds, tobacco, and cotton while its supplies of oilcakes and fats and oils come largely from imported raw materials. In the case of hides and skins, there are no tariffs or restrictions in either the EC or EFTA.

However, about 45 percent of average annual agricultural imports from the United States in 1968-70—or $87 million—consisted of grains, meat and meat preparations, and fruit and vegetables. The EC has experienced chronic problems in marketing grains, certain fruits and vegetables, and occasionally poultry and pork in recent years and is likely to press for their inclusion in any grant of agricultural concessions by the EFTA neutrals. Such concessions could intensify the competition of U.S. and EC exporters of these products in the neutrals' markets.

Wheat, corn, and rice are the major grains imported by the neutrals from the United States. These imports have recently shown a declining trend—partly because of increased self-sufficiency and partly due to market pressure from other suppliers, including the EC. Their average annual value of $35 million in 1968-70 was only about half the 1965-67 average.

EC competition with the United States in the grain import markets of the EFTA neutrals is already strong. In 1968-70 the EC supplied about a quarter of the wheat imports in these markets, nearly 40 percent of rice imports, and nearly half of coarse grains imports. While barley makes up the bulk of the EC shipments, about 150,000 tons of corn, primarily to Switzerland, have been supplied by them in recent years.

The EC also competes with most U.S. fruit and vegetable exports in the markets of the remaining EFTA members. Imports of fruits and vegetables from the EC were almost four times those from the United States. They compete directly with U.S. exports of citrus (oranges and lemons), apples, pears, berries, fresh grapes, edible nuts, and most U.S. processed fruit and vegetable products.

Within the meat group, U.S. exports of poultry, mainly to Switzerland and Sweden, could be affected by increased competition in the neutrals' markets.

U.S. trade interests could also be adversely affected if the Community grants reciprocal trade concessions on agricultural products to the EFTA neutrals. Thus far, however, the EC has limited its offer to certain processed foods not listed in Annex II of the CAP. EC imports from the United States of such processed foods averaged close to $5 million annually in 1968-70.

Effect of enlargement on the neutrals. In 1968-70, the remaining EFTA countries exported an annual average of $145 million in agricultural products to the EC applicants—about one-fifth of their total exports of agricultural products.

As a condition of EC entry, the United Kingdom, Denmark, and Norway must terminate membership in the Association and accept all of the policies and regulations embodied in the EC CAP. The three entrants' agricultural support prices, as well as their levies and duties, will be brought into line with those of the EC over a 5-year period. (A special arrangement will extend the period for Norway.) Community preference will be introduced immediately after entry. Ultimately, the full burden of the EC variable levies or external tariffs will fall on agricultural imports from outside the Community.

Although EFTA has aimed primarily at the elimination of barriers to industrial trade, certain measures were taken to promote intra-EFTA agricultural trade. Adoption of the CAP by the three EC applicants will result in the termination of these measures within the three countries unless special arrangements are made.

Agricultural trade between the EFTA neutrals and the EC applicants has benefited from the special treatment of

Table 1.—Imports of U.S. agricultural products by EFTA neutrals, by commodity, 1968-70 average

[Million U.S. dollars]

Commodity	Total value
Meat and meat preparations	6.7
Grains and grain preparations	34.6
Wheat and flour	14.7
Feedgrains	13.7
Rice	5.0
Fruits and vegetables	45.6
Animal feed	15.6
Tobacco, unmanufactured	53.1
Hides and skins	5.4
Oilseeds, nuts, and kernels	5.2
Cotton	10.3
Crude animal and vegetable materials	3.8
Fats and oils, excl. fish	3.5
Total selected	183.8
Total agricultural	192.7

Source: U.N. Agricultural Trade Statistics, 1968-70.

classifying some agricultural products as "industrial" for the purpose of tariff reduction. Among the products receiving this special treatment are almonds and chestnuts, chocolate products, certain prepared cereal products and pastries, and canned tomato paste, olives, and meats.

Also, to facilitate trade in agricultural products certain members have concluded bilateral agreements that include preferential tariff treatment for members' agricultural trade and provisions for eliminating certain tariff duties. EFTA rules stipulate that preferential tariff treatment granted in these bilaterals must be extended to all members. At the end of 1969, EFTA had 10 basic bilateral agreements—five between the neutrals and the EC applicants. While Denmark is the major beneficiary of these agreements, they have made a modest contribution towards promoting agricultural exports of the neutrals.

This preferential treatment granted to certain agricultural exports of the remaining EFTA countries, particularly where the preferences run counter to the EC marketing and trade regulations, will probably be terminated. Also, EC tariffs and variable levies will replace the national tariffs and trade restrictions of the EC applicants—resulting in higher levels of import protection, particularly in the United Kingdom. As a result, many of the agricultural exports of the remaining EFTA countries to the EC applicants will face entirely different trading conditions. In addition, the five EFTA countries will face increased competition from EC exporters, who will enjoy Community preference.

Import protection up for most commodities. The major agricultural commodities exported by the EFTA neutrals to the United Kingdom, Denmark, and Norway are grains and grain preparations, meat and meat preparations, dairy products, and fruits and vegetables. Hides and skins, chocolate products, certain processed food products, and fats and oils (including oilseeds) are also important. In 1968-70, these products accounted for nearly 80 percent of the agricultural exports of the remaining EFTA countries to the EC applicants.

The neutrals' agricultural commodities that would be most affected are grains and grain preparations, meat and meat preparations, dairy products, and to a lesser extent, wine, sugar, chocolate products, and certain processed food products. In 1968-70, the remaining EFTA countries' exports of these products to the three EC applicants averaged $110 million annually, or 75 percent of their total agricultural exports to the applicants. The neutrals' exports of such products will face considerably less favorable treatment in the applicants' markets after enlargement.

Grain imports by the EC applicants are currently governed by individual national policies. Until 1970, U.K. grain imports were generally subject to only a small tariff duty. The United Kingdom introduced a variable levy system in 1971—in preparation for EC membership. Adoption of EC support price levels for grains will result in further substantial increases in protection. For example, U.K. minimum import prices for wheat under the CAP are expected to be about 80 percent higher than the levels in force in January 1971.

Table 2.—Agricultural exports of the EFTA neutrals to the EC applicants, by commodity, 1968-70 average

[Million U.S. dollars]

Commodity	Austria	Portugal	Sweden	Switzerland	Finland	Total
Meat and meat preparations	(1)	(1)	12.2	1.1	2.6	15.9
Dairy products and eggs	3.4	(1)	4.3	1.7	11.4	20.8
Grains and grain preparations	.1	(1)	20.9	.7	2.9	24.6
Fruit and vegetables	.4	15.1	4.8	.9	.5	21.7
Sugar and honey	.1	(1)	1.9	.1	2.6	4.7
Coffee, tea, and cocoa	(1)	(1)	.9	1.4	(1)	2.3
Chocolate products	4.4	(1)	1.9	3.6	.5	10.4
Animal feed	(1)	.1	.4	(1)	.4	.9
Processed food products n.e.s.	.1	(1)	1.5	2.6	(1)	4.2
Hides and skins	.1	(1)	4.7	.9	5.4	11.1
Crude animal materials, n.e.s.	.9	.1	.9	.4	.3	2.6
Fats and oils, excl. fish	(1)	.1	4.9	.6	.5	6.1
Total selected	9.5	15.4	59.3	14.0	27.1	125.3
Total agricultural	9.9	[2] 26.2	66.1	15.5	27.1	144.8

[1] Less than $50,000.

[2] Includes $9.4 million, average 1968-70, of wine exports to the EC applicants.

Inspecting hog carcasses in a Norwegian cooperative slaughterhouse.

Import barriers will also rise when the United Kingdom adopts the variable levy system for most dairy and meat products. The United Kingdom is by far the most important market within EFTA for these products. Preferential treatment applied to intra-EFTA trade in some of these products, most notably canned pork into the United Kingdom.

Restrictions on fruit and vegetable imports from the neutrals will generally increase in all three applicants after entry. Imports of many fruits and vegetables are now subject to import calendars and quantitative restrictions; however, a number of products (garlic, figs, nuts, melons, olives, tomato products, grapes) benefit from preferential treatment. Under the CAP, fruit and vegetable products will be subject, in many cases, to minimum import prices and to variable levies on their sugar-added content. In addition, duties on fruit and vegetables tend to be higher in the EC, particularly as compared with U.K. rates.

EC tariffs on chocolate and processed food products are generally higher than those of the applicants. Processed products containing grains, dairy products,

(Continued on page 12)

CROPS AND MARKETS

GRAINS, FEEDS, PULSES, AND SEEDS

Rotterdam Grain Prices and Levies

Current offer prices for imported grain at Rotterdam, the Netherlands, compared with a week earlier and a year ago:

Item	May 17	Change from previous week	A year ago
	Dol. per bu.	*Cents per bu.*	*Dol. per bu.*
Wheat:			
Canadian No. 1 CWRS-14	1.98	−1	[1] 1.89
USSR SKS-14	1.85	0	1.89
Australian FAQ	([2])	([2])	1.78
U.S. No. 2 Dark Northern Spring:			
14 percent	1.89	0	1.87
15 percent	1.96	−1	1.92
U.S. No. 2 Hard Winter:			
13.5 percent	1.82	0	1.90
No. 3 Hard Amber Durum	1.86	+2	1.79
Argentine	([2])	([2])	([2])
U.S. No. 2 Soft Red Winter	([2])	([2])	1.77
Feedgrains:			
U.S. No. 3 Yellow corn	1.48	+1	1.64
Argentine Plate corn	1.75	+2	1.69
U.S. No. 2 sorghum	1.45	−2	1.44
Argentine-Granifero sorghum	1.46	−2	1.44
U.S. No. 3 Feed barley	1.20	+1	1.19
Soybeans:			
U.S. No. 2 Yellow	3.90	+8	3.30
EC import levies:			
Wheat [3]	[4] 1.99	0	1.40
Corn [5]	[4] 1.30	0	.86
Sorghum [5]	[4] 1.34	+3	1.00

[1] Manitoba No. 2. [2] Not quoted. [3] Durum has a separate levy. [4] Effective October 14, 1971, validity of licenses with levies fixed in advance is a maximum of 30 days. [5] Italian levies are 21 cents a bu. lower than those of other EC countries.

Note: Basis—30- to 60-day delivery. Beginning May 9, 1972, the EC levy was increased because of the official devaluation of the dollar vis-a-vis the EC unit of account. The new exchange rate is one unit of account=US$1.0857. Prior to May 9, the dollar and unit of account were of equal value.

Little Wheat Crop Kill Reported in Caucasus

Travel by the U.S. Agricultural Attaché during April 25-29 through parts of the Northern Caucasus, the most important area of winter wheat in the Russian Federation, revealed that the condition of both spring and winter crops and soil moisture was better than reported earlier, and that winterkill was minimal in that area. No new reports have been received on crop conditions in the Ukraine, the second most important producer of winter wheat, and other major grain producing regions, but total grain acreage is being expanded to offset winter losses in these areas.

As of May 1, 148.3 million acres had been seeded to spring crops in the whole country, 24.7 million acres more than last year. The total of corn for grain is expected to reach approximately 12.4 million acres this year compared to a harvested area of 8.1 million acres in 1971 and 8.4 million acres in 1970.

Australia's Long Grain Rice Crop Reduced

Australia should have reduced supplies of long grain rice for commercial markets because cyclones ruined the winter crop in Queensland, and also reduced sowing of the summer crop. The Queensland area, which produces all of Australia's long grain rice, is a major factor influencing Australia's efforts to sell more rice to European markets.

South Africa Selling Corn at Faster Pace

South Africa is selling corn for export at a faster pace this marketing season. Tenders for May-June last year amounted to 14 cargoes (about 170,000 tons). This season 42 cargoes were sold for May-June shipment (about 535,000 tons). Normally sales are slow until the corn is all harvested; however, with a record crop this year and a 1.8-million-ton carryover, sales are continuing at the fast pace of the past few months.

Unsold U.K. Cereal Stocks Larger Than a Year Ago

Unsold stocks of wheat, barley, and oats on farms in the United Kingdom at the end of March 1972 were estimated at 1.99 million tons, compared to 1.41 million tons at the same time last year. Low prices at the beginning of 1972 may have encouraged farmers to hold their grain, especially since they received a second advance installment in deficiency payments in March. Also, U.K. farmers this year for the first time are being protected by an EC-type seasonally rising threshold price and thus may not have been under the usual pressure to sell their grain early in the marketing year.

LIVESTOCK AND MEAT PRODUCTS

March Imports of Meats Subject to Meat Import Law

March imports of meats subject to the Meat Import Law totaled 75 million pounds—15 percent below entries for the same month last year. Arrivals from Ireland were down about 11 million pounds. Imports of Canadian and Australian meat were also significantly below year-earlier levels. However, im-

ports from Central America, including Mexico, were about 15 percent above those of last year.

U.S. IMPORTS OF MEAT SUBJECT TO MEAT IMPORT LAW, JANUARY-MARCH 1972 WITH COMPARISONS[1][2]

Country of origin	March		January-March		
	1971	1972	1971	1972	Percent change
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*Percent*
Australia	27,454	25,543	81,050	101,602	+25
New Zealand	17,980	17,454	39,707	39,446	−1
Mexico	9,096	9,066	28,833	21,822	−24
Costa Rica	6,832	7,415	19,333	21,369	+11
Ireland	11,873	864	23,983	16,388	−32
Nicaragua	3,098	4,755	10,950	14,193	+30
Canada	6,932	4,121	19,364	12,247	−37
Guatemala	2,402	2,575	5,628	6,868	+22
Honduras	1,637	1,569	5,571	4,984	−11
Dominican Republic	15	1,303	360	2,591	+620
Panama	659	405	1,131	1,015	−10
Haiti	67	163	179	343	+92
United Kingdom	306	—	750	37	−95
Total[3]	88,351	75,234	236,840	242,905	+3

[1] Preliminary. [2] Fresh, frozen and chilled, beef, veal, mutton, and goat meat, including rejections. Excludes canned meat and other prepared or preserved meat products. [3] May not add due to rounding.

U.S. IMPORTS OF MEAT SUBJECT TO MEAT IMPORT LAW (P.L. 88-482)

Imports	March	January-March
	Million pounds	*Million pounds*
1972:		
Subject to Meat Import Law[1]	75.2	242.9
Total beef and veal[2]	89.8	291.7
Total red meat[3]	135.6	432.2
1971:		
Subject to Meat Import Law[1]	88.4	236.8
Total beef and veal[2]	101.9	271.0
Total red meat[3]	147.8	390.5
1970:		
Subject to Meat Import Law[1]	112.1	337.2
Total beef and veal[2]	124.7	372.6
Total red meat[3]	171.3	495.0

[1] Fresh, chilled, and frozen beef, veal, mutton, and goat meat, including rejections. [2] All forms, including canned and preserved. [3] Total beef, veal, pork, lamb, mutton, and goat.

New Bat Control Method To Help Latin American Cattle Producers

Latin American cattle producers may benefit to the tune of millions of dollars if a recently developed method to control the vampire bat works as successfully elsewhere in Central and South America as it did during field tests in Brazil and Mexico.

The control method, developed in a joint 4-year-long research project by the Agency for International Development and the Interior Department, concentrated on the *Desmodus rotundus*, one of three species of vampire bats—all of which live in the Western Hemisphere.

The recently completed tests have shown that vampire numbers can be decreased through the use of a blood anticoagulant normally used for human heart patients, which causes the bats to die of internal hemorrhaging.

The United Nations Food and Agriculture Organization has estimated that some $250 million worth of livestock die a year in Latin America as the result of direct attacks by vampire bats. These bats are also potential carriers of rabies, and evidence exists that they may transmit the Venezuelan equine encephalomyelitis virus.

There is some belief that vampire bats may have been involved in the 1970-71 outbreak of the equine disease which killed thousands of horses in Mexico and Central America and threatened more in the southwestern United States.

FATS, OILS, AND OILSEEDS

Philippine Oil and Copra Exports Soar in First 3 Months of 1972

Exports of copra and oil from the Philippines during January-March increased 52 percent to 269,000 metric tons, oil basis, compared with 177,000 tons in the same 3 months in 1971.

The 92,000-ton increase for the 3-month period will widen to perhaps 175,000 tons for calendar 1972, though the rate of increase may narrow to roughly approximate 20 percent above the 1971 volume. Last year, Philippine exports increased by 259,000 tons.

The increase this year reflects the fact that rainfall in the major producing areas has averaged 25 percent above the long-term average and 12.5 percent above last year. In addition, numbers of bearing trees in 1972 are estimated to have increased by more than 5 percent from last year.

FRUITS, NUTS, AND VEGETABLES

Portuguese Wine Sales Show Steady Increase

The United States is now the largest foreign market for Portuguese wine, which in turn is Portugal's largest export item.

Portuguese exports of wine to the United States—particularly of table wines—have shown a steady increase in value since 1966. Totaling some $2.6 million in that year, wine purchased by the United States grew to nearly $9 million in 1970 and to an estimated $13 million in 1971, according to Portuguese export data.

U.S. trade figures, however, show the total of Portuguese wine exports to the United States to be even higher—$14.9 million (c.i.f. basis) in 1970 and $20.5 million in 1971.

About 90 percent of the sales to the United States were table wines; the remainder consisted of port, madeira, champagne, and sparkling wines. U.S. purchases of Portuguese table wines (according to U.S. data) amounted to $1.9 million in 1966, some $13.3 million in 1970 and about $18 million in 1971.

Portugal's total wine exports consisted mostly of red, rosé, and white table wines (62 percent); the balance were sweet, fortified madeira, port, and champagne.

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Foreign Agriculture

Coffee Rust: Part II (Continued from page 6)

feasible? What are the long-term effects of using copper sprays (assuming they are successful in the short run)? What success can be expected from a program of breeding and disseminating resistant varieties? And, above all, is the skill and effectiveness of the hundreds of thousands of individual farmers who will have to make the program work, if it is to work at all, sufficient to achieve success?

At this time, only a few tentative judgments may be hazarded:

- Rust is in Brazil to stay—and can be expected to continue to spread. Conditions for its dissemination are favorable, to a greater or lesser degree, in all of the country's coffee-producing areas.
- Rust does not kill infected trees quickly. Rather, death follows several years of serious defoliation during which the ability of the tree to set and mature fruit progressively declines. There may be time for the gradual replacement of present trees by resistant varieties before serious crop loss occurs.
- The IBC program to fight rust appears to be well organized and adequately financed. Brazil's scientists and technicians have the knowledge to improve coffee technology throughout the country, and to advise farmers how to combat coffee rust.
- Research into rust-resistant varieties is well advanced and sufficient planting material should be available after 1974 to institute a program of replanting in affected areas.
- The cost of producing coffee may rise, not only because of the costs of chemicals and their application, but because new methods of cultivation imply fewer trees per acre. Resistant varieties are less productive than the trees they would replace.
- In the final analysis, the individual farmer is the critical, and unknown, factor. Good control of rust will depend on his using the correct chemical, mixed correctly, in the correct quantity, with the correct number of applications and the correct timing of each application.

This alone, however, would not be enough. To achieve a level of productivity sufficient to provide economic resources to combat rust requires a radical change in the traditional way of producing coffee which could tax the managerial skills of the Brazilian farmer.

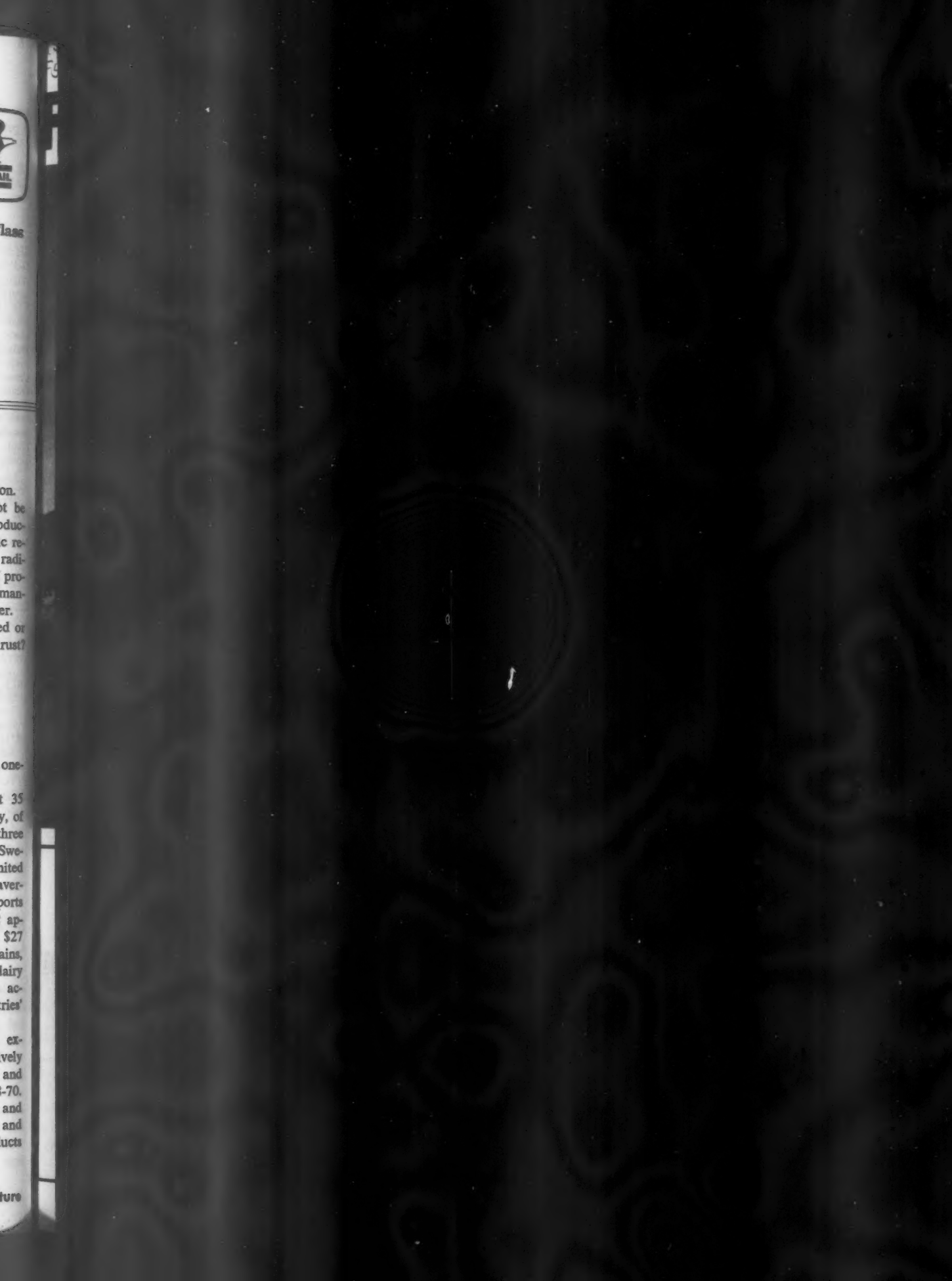
Will the Brazilian farmer succeed or fail in his attempts at controlling rust? Only time will tell.

The EC and the EFTA (Continued from page 9)

or sugar are generally subject to variable levies based on the grain, dairy, or sugar content. Again, for many of these products (and all chocolate products), preferential duty-free treatment has been granted within EFTA.

Implications for EFTA neutrals. Import changes in the applicants' markets would have the greatest adverse effect on Portugal, Sweden, and Finland.

In the Portuguese economy, agricultural exports are particularly important, accounting for about 20 percent of total exports. Portugal's exports of farm products—primarily processed tomato products and wine—to the EC applicants averaged $26 million in 1968-70, or about 18 percent of total agricultural exports. During 1968-70, Portugal exported an average of $42 million of processed vegetables (mainly tomatoes); nearly a third went to the EC applicants. In the same period, the EC applicants took an average of $9.4 million in Portuguese wine, or about one-sixth of its total wine exports.

Sweden and Finland sell about 35 percent and 25 percent, respectively, of their agricultural exports to the three EC applicants. During 1968-70, Sweden's agricultural exports to the United Kingdom, Denmark, and Norway averaged $66 million. Finnish farm exports of farm products to the three EC applicants amounted to an average of $27 million in the same period. Grains, meat and meat preparations, dairy products, and fruit and vegetables account for most of the two countries' farm exports to the EC applicants.

Austrian and Swiss agricultural exports to the EC applicants are relatively small—an average of $9.9 million and $15.5 million, respectively, in 1968-70. These consisted primarily of dairy and chocolate products for Austria, and chocolate and processed food products for Switzerland.